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AUTHOR Stanbrough, Mark; Stinson, Bill
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ABSTRACT

The goal of this project was to develop customized teaching analysis software that would accurately measure recorded teaching behaviors and communicate useful results quickly to the observed teacher with the goal of improving teacher performance. A computer software program, "The Evaluator," was developed that uses a Windows interface programmed in Visual Basic language. It was designed to effectively measure time on task behaviors as well as frequency of teacher related behaviors. "The Evaluator" allows collection of data for any observable behavior that can be timed, counted, or commented on. The opening format has four sections (evaluation forms, online evaluation, evaluation data, reports), each containing a help portion to assist in performing the functions of that section. The program is designed to print reports, charts, and graphs for immediate feedback. Evaluators using this program are able to use their time more efficiently, primarily after the evaluation is complete, for counseling the individuals. (AEF)

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Developing a Customized Teaching Assessment Software Instrument

By:

Mark Stanbrough
Bill Stinson

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Developing a Customized Teaching Assessment Software Instrument

Mark Stanbrough
Emporia State University

Bill Stinson
Emporia State University

Teachers learn a great deal through trial and error. Yet, as we continue to teach, it becomes obvious that planning, organization, student characteristics, progression of skills, social dynamics and other variables are prominent elements in our teaching performance. We must not only be visionary but also analytical in what creates an effective learning environment.

Teachers need to subject themselves not only to periodic self-evaluation, but also to the scrutiny of peers, superiors, and to their students as well. Subjective ratings, anecdotal records, and comments from others are an important part of evaluating teaching effectiveness. However, many of these methods may lack reliability and may not be easily transformed into solutions for a problem area. Systematic evaluations are objective. The objective data created from observation of frequency of events (such as positive feedback or using student names) and duration of activity (such as time on task or opportunities for correct skill practice) contributes a great deal of information about what is actually going on.

Rationale For Developing Customized Software

There are a variety of pencil and paper assessment instruments available for analyzing and evaluating teaching performance. The instructors wanted to share with the students a variety of educational technologies. Therefore, a search for software which facilitates collecting, analyzing, and reporting of observable teaching behaviors was instigated. The advantages of such a computer software program that utilizes objective criteria such as time and frequency enables a person with minimal training to conduct an evaluation of someone's teaching performance. Computerized screen presentations and graphical printouts of a teaching performance would create an immediate and informative awareness of one's teaching behaviors. Simultaneous situations recordings such as time on task and frequency of behaviors could be tracked and transcribed more easily through software technology than by a manual paper-pencil and stop watch operation.

The current software packages available did not address all of our needs. The decision was made to develop our software in a Windows environment. The Windows interface would make the computer program more user friendly than MS-DOS based software available. Our goal was to develop customized teaching analysis software that would accurately measure any recorded various teaching behaviors and communicate useful results quickly to the observed teacher with the goal of improving teacher performance.

Development of *The Evaluator*

Our objective was accomplished by developing a PC computer software program, *The Evaluator* (Henry and Hubbard, 1997), that uses a Windows interface programmed in Visual Basic language. It was designed to effectively measure time on task behaviors as well as frequency of teacher related behaviors. *The Evaluator* allows collection of data for any observable behavior that can be timed, counted or commented on. Specific behaviors to be measured can be determined by the observer prior to actual observation.

Figure 1 shows the opening format. The window has four sections. Each section contains a help portion to assist in performing the functions of that section.

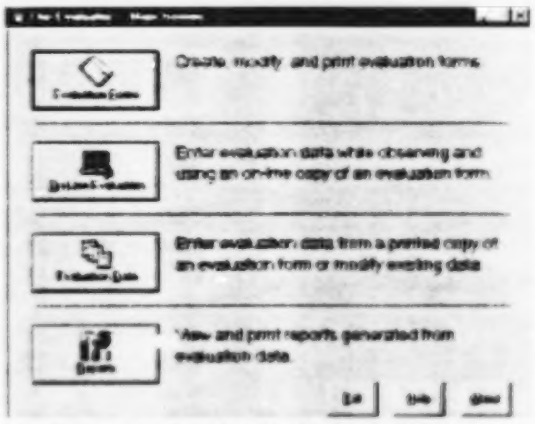

Figure 1. *The Evaluator* Main Screen.

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Evaluation forms. Creates, modifies, and prints evaluation forms.

Online Evaluation. Evaluation data is entered while observing using a developed online copy of an evaluation form.

Evaluation Data. Evaluation data is entered from a printed hard copy of an evaluation form or to modify existing data.

Reports. View and print reports generated from evaluation data in statistical and graphical representation.

Figure 2 shows a form that has been designed in advance to record the specific observations of a teacher's lesson performance.

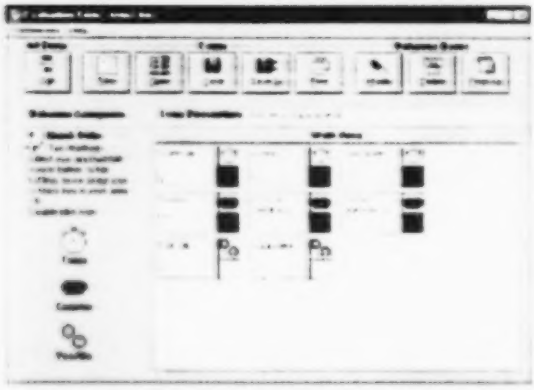

Figure 2. *The Evaluator* Evaluation Form.

This software program can be used with a PC or laptop computer input directly in the classroom/gymnasium or in conjunction with paper/pencil recording with later transfer to the software program using an online form such as figure 2. The program is designed to print reports, charts and graphs for immediate feedback. Figure 3 is an example of a completed evaluation of a teacher's performance. This report was instantly processed and displayed for immediate feedback to that teacher.

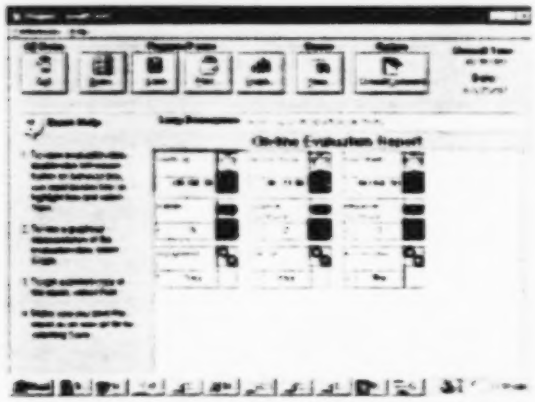

Figure 3. *The Evaluator* Online Completed Evaluation Form.

In addition, figure 4 is a graphical representation of observations recorded in that lesson. Graphics can help a teacher get a better "picture" of how the lesson progressed.

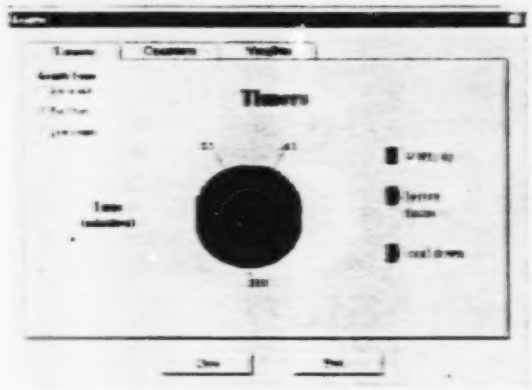

Figure 4. *The Evaluator* Graphic Report.

The advantages of a computer software program that utilizes objective criteria such as time and frequency are obvious. An individual possessing minimal training can conduct an evaluation of another person's performance. The computerized screen presentation and/or printout with a graphical display of a performance are immediate and informative devices which give someone immediate awareness of their teaching behaviors. Simultaneous situations (such as time on task, definitive portions of a lesson - introduction, review, etc.) as well as the time span of those situations can be tracked more easily through the software's technology rather than manually through a person's paper/pencil and stop watch procedures.

Final Thoughts

Evaluators using *The Evaluator* are able to use their time more efficiently, primarily after the evaluation is complete for counseling the individuals. The work is virtually done after the evaluation. All of the reports are generated automatically and immediately by *The Evaluator*. The reports can be graphically demonstrated to allow better understanding. Immediate feedback is the major contributor to behavior change. The immediate feedback of *The Evaluator's* reports increases the likelihood that an evaluation will result in positive behavioral changes. *The Evaluator* can identify specific areas for improvement of individuals being evaluated. The objective accuracy of *The Evaluator* means more confidence in the results and the more likely they will be accepted. As the performance of a person being evaluated improves through the use of *The Evaluator*, the performance levels of others will also improve. *The Evaluator* can also be used to measure time on task and other learning behaviors of teachers. The same benefits of evaluation, immediate feedback and positive behavior change that applies to teachers can also be applied to students. A demonstration version and infor-

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mation on the computer software program *The Evaluator*, may be obtained at web site: http://www2.southwind.net/~guerilla or by contacting Guerrilla Software, 6826 East Odessa Ct., Wichita, KS 67226.

References

Henry, J., & Hubbard, S. (1997). *The Evaluator*. Wichita, KS: Guerilla Software.

Mark Stanbrough is an Associate Professor in the Division of HPER, Teachers College, Box 4013, Emporia State University, Emporia, KS 66801. Voice: (316) 341-5399, Fax 316-341-5603.

Bill Stinson is a Professor in the Division of HPER, Teachers College, Box 4013, Emporia State University, Emporia, KS 66801. Voice: (316) 341-5934, Fax 316-341-5603. E-mail stinsonb@emporia.ed